

Application Number 09/266,674
Amendment dated April 21, 2004
Responsive to Office Action mailed October 28, 2003

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application. In the Office Action of October 28, 2003, claims 23-58 were renumbered by the Examiner as claims 1-36.

Listing of Claims:

Claim 1 (Currently amended): A drip chamber system for draining cerebral spinal fluid (CSF) from a brain comprising:

a ~~tube~~ fluid reservoir,

an outlet manifold in fluid communication with the ~~tube~~ fluid reservoir, the outlet manifold having an ~~outlet~~ outlet;

an inlet manifold in fluid communication with the ~~tube~~ fluid reservoir, the inlet manifold having an inlet and an outer surface, the inlet manifold having a vent, the inlet manifold having an inside surface, the vent having a filter made of a porous material wherein a the pore size of the porous material filter ranges from greater than .45 μm to about 5.0 μm and wherein the vent has a surface area ranging from about .0.8 cm^2 to about 5.0 cm^2 ;

a drainage bag; and

a stopcock connecting the ~~tube~~ drip chamber to the drainage bag through the outlet.

Claim 2 (Currently amended): The drip chamber system of claim 1 wherein the pore size of the porous material filter is about 3 μm .

Claim 3 (Original): The drip chamber system of claim 1 wherein the filter is made of expanded polytetrafluoroethylene (e-PTFE) (~~ePTFE~~).

Claim 4 (Original): The drip chamber system of claim 1 wherein the porous material is a hydrophobic material.

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Claim 5 (Canceled).

Claim 6 (Currently amended): The drip chamber system of claim 1 wherein the filter is flush with the outer surface of the inlet manifold.

Claim 7 (Currently amended): The drip chamber system of claim 6 wherein the vent is integral with an the outer surface of the tube. ~~fluid-reservoir.~~

Claim 8 (Currently amended): The drip chamber system of claim 1 wherein the vent is integral with an the outer surface of the tube. ~~fluid-reservoir.~~

Claim 9 (Currently amended): The drip chamber system of claim 1 wherein the tube of the drip chamber is ~~made of a rigid~~ tube.

Claim 10 (Currently amended): The drip chamber system of claim 19 wherein the ~~rigid-tube of the drip chamber~~ is generally cylindrical.

Claim 11 (Currently amended): The drip chamber system of claim 10 wherein the filter is formed in the inlet manifold by creating a hole in the inlet manifold and covering the hole with the a porous material.

Claim 12 (Original): The drip chamber system of claim 11 wherein the porous material is a hydrophobic material.

Claim 13 (Currently amended): The drip chamber system of claim ~~13~~12 wherein the porous material is expanded polytetrafluoroethylene (e-PTFE)(~~ePTFE~~).

Claims 14 and 15 (Canceled).

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Claim 16 (Currently amended): The drip chamber system of claim 1314 wherein the pore size of the porous material is about 3 μm .

Claim 17 (Currently amended): A drip chamber system for draining cerebral spinal fluid (CSF) from a brain comprising:

a tube;

an outlet manifold in fluid communication with the tube, the outlet manifold having an outlet;

an inlet manifold in fluid communication with the fluid reservoir, the inlet manifold having an inlet and an outer surface, the inlet manifold having a vent, the inlet manifold having an inside surface, the vent having a filter made of a porous material wherein a pore size of the porous material ranges from greater than .45 μm to about 5.0 μm . The drip chamber system of claim 1 wherein the porous material is adhered to the inside surface of the inlet manifold;

a drainage bag; and

a stopcock connecting the tube to the drainage bag through the outlet.

Claim 18 (Original): The drip chamber system of claim 17 wherein the porous material is adhered to the inside surface of the inlet manifold by a technique chosen from the group consisting of biocompatible adhesive, heat staking, ultrasonic welding or radio frequency (RF) welding.

Claim 19 (Currently amended): A drip chamber system for draining cerebral spinal fluid (CSF) from a brain comprising:

a tube; fluid reservoir,

an outlet manifold in fluid communication with the ~~tube fluid reservoir~~, the outlet manifold having an ~~outlet; outlet~~

an inlet manifold in fluid communication with the ~~tube fluid reservoir~~, the inlet manifold having an inlet and an outer surface, the inlet manifold having a vent, the inlet manifold having an inside surface, the vent having a filter made of a porous material wherein the pore size of the

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porous material filter ranges from about .22 μm to about 5.0 μm , and wherein the vent has a surface area ranging from about .0.8 cm^2 to about 5.0 cm^2 ;

a drainage bag; and

a stopcock connecting the drip chamber to a drainage bag through the outlet.

Claim 20 (Currently amended): The drip chamber system of claim 19 wherein the pore size of the porous material filter is about 3 μm .

Claim 21 (Currently amended): The drip chamber system of claim 19 wherein the filter is made of expanded polytetrafluoroethylene (e-PTFE)(EPTFE).

Claim 22 (Original): The drip chamber system of claim 19 wherein the porous material is a hydrophobic material.

Claim 23 (Canceled).

Claim 24 (Original): The drip chamber system of claim 19 wherein the filter is flush with the outer surfaces of the inlet manifold.

Claim 25 (Currently amended): The drip chamber system of claim 24 wherein the vent is integral with an the outer surface of the tube. ~~fluid reservoir.~~

Claim 26 (Currently amended): The drip chamber system of claim 19 wherein the vent is integral with an the outer surface of the tube. ~~fluid reservoir.~~

Claim 27 (Currently amended): The drip chamber system of claim 19 wherein the tube drip chamber is ~~made of a rigid tube.~~

Claim 28 (Currently amended): The drip chamber system of claim 19 ~~27~~ wherein the ~~rigid tube~~ of the drip chamber is generally cylindrical.

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Claim 29 (Currently amended): The drip chamber system of claim 2919 wherein the filter is formed in the inlet manifold by creating a hole in the inlet manifold and covering the hole with a the porous material.

Claim 30 (Original): The drip chamber system of claim 29 wherein the porous materials is a hydrophobic material.

Claim 31 (Currently amended): The drip chamber system of claim 29 wherein the porous material is expanded polytetrafluoroethylene (e-PTFE)(~~ePTFE~~).

Claim 32 (Canceled).

Claim 33 (Currently amended): The drip chamber system of claim 3219 wherein the pore size of the porous material ranges from greater than .45 μm to about 5.0 μm .

Claim 34 (Currently amended): The drip chamber system of claim 3233 wherein the pore size of the porous material is about 3 μm .

Claim 35 (Currently amended): A drip chamber system for draining cerebral spinal fluid (CSF) from a brain comprising:

a tube;
an outlet manifold in fluid communication with the tube, the outlet manifold having an outlet;
an inlet manifold in fluid communication with the tube, the inlet manifold having an inlet and an outer surface, the inlet manifold having a vent, the inlet manifold having an inside surface, the vent having a filter made of a porous material wherein the pore size of the porous material ranges from about .22 μm to about 5.0 μm ~~The drip chamber system of claim 19~~
wherein the porous material is adhered to the inside surface of the inlet manifold;
a drainage bag; and

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a stopcock connecting the drip chamber to a drainage bag through the outlet.

Claim 36 (Original): The drip chamber system of claim 35 wherein the porous material is adhered to the inside surface of the inlet manifold by a technique chosen from the group consisting of biocompatible adhesive, heat staking, ultrasonic welding or radio frequency (RF) welding.

37. (New) A drip chamber system for draining cerebral spinal fluid (CSF) from a brain comprising:

a tube;

an outlet manifold in fluid communication with the tube, the outlet manifold having an outlet;

an inlet manifold in fluid communication with the fluid reservoir, the inlet manifold having an inlet and an outer surface, the inlet manifold having a hydrophobic vent, the inlet manifold having an inside surface, the hydrophobic vent having a filter made of a hydrophobic porous material;

a drainage bag; and

a stopcock connecting the tube to the drainage bag through the outlet.

38. (New) The drip chamber system of claim 37, wherein the hydrophobic porous material is adhered to the inside surface of the inlet manifold.

39. (New) The drip chamber system of claim 37, wherein a pore size of the hydrophobic porous material ranges from about .22 μm to about 5.0 μm .

40. (New) The drip chamber system of claim 39, wherein the pore size of the hydrophobic porous material ranges from about .45 μm to about 5.0 μm .